DOCUMENT RESUME

ED 405 825 IR 018 265

AUTHOR Monk, Susan V.
TITLE Project Vision: An On-line Learning Initiative for College Freshmen.
PUB DATE 96
NOTE 11p.; In: Association of Small Computer Users in Education (ASCUE) Summer Conference Proceedings (29th, North Myrtle Beach, SC, June 9-13, 1996); see IR 018 247.
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Freshmen; Computer Mediated Communication; Computer Uses in Education; Cooperative Learning; *Curriculum Development; *Distance Education; *Educational Innovation; *Educational Technology; Faculty; Higher Education; Information Skills; Librarians; Online Searching; *Online Systems; Portfolios (Background Materials); Program Development; Student Attitudes; Teamwork
IDENTIFIERS *Pennsylvania State University

ABSTRACT

Project Vision was undertaken by the Pennsylvania State University Commonwealth Campus System (which includes 18 different campuses across Pennsylvania) to explore the potential of interactive instructional technology. Three campuses were chosen to participate, each of which selected a librarian, three faculty, and 20 incoming freshman students. Teams of faculty, one from each of the three campuses, were responsible for developing online courses in their respective disciplines. Three courses were selected for the first year: Health Education; American Studies; and Science and Technology in Society. In addition, a new course was developed, Library Studies, to introduce students to necessary technology and search skills. Project Vision provided students with their own laptop computer for use during the school year, with a direct connection from their dorm room or the capability to dial-in from home. To build a sense of community across the three campuses, Project Vision hosted a picnic at the beginning of the year and established learning studios, which were reserved for the students, at each of the campuses. Groups were assigned; they then chose the particular issue they wanted to research and present. To assess an individual student's accomplishments in the course, each student was asked to assemble a portfolio of the resources found and the student's contributions to the group. In general, students were very positive about their experiences with Project Vision. The part they liked least was the group work. (AEF)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Project Vision: An On-line Learning Initiative for College Freshmen

ED 405 825

Susan V. Monk
Department of Kinesiology
Penn State Berks
P.O. 7009, Tulpehocken Road
Reading, PA 19606
610-320-4882
E-mail: svm2@psu.edu

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Web sites: Project Vision Health Education 48 Course
http://www.clat.psu.edu/homes/hlthed/hemain.htm
Center for Learning and Academic Technology Home Page
http://www.clat.psu.edu

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
C.P. Singer
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Introduction

> "The Americans have need of the telephone--but we do not. We have plenty of messenger boys.?.?. "
> Chief engineer of the British Post Office upon hearing of the news of Alexander Graham Bell's invention. Clarke, A.C., How the World Was Won (New York, NY: Bantam Books, 1992)., p. 224.

This quote reminds us that there is always resistance to new technology, that it is never possible to comprehend fully what ultimately will develop from a new technology, and that it is difficult to envision what impact a new technology will have upon a society. One can readily see the parallels between the invention of the telephone and the rapid development of the information technology.

> "Higher education is being challenged to define new ways of creating and disseminating information..."
> Strategic Planning Report, Society for College and University Planning, Ann Arbor, MI, 1993.

Educators have always been concerned with finding better ways of teaching and learning, but there is increased societal scrutiny of the educational product, and demand of accountability for the qualitative nature of education. The development of information technology has received a mixed blessing from this scrutiny; where it has been welcomed, much time and effort is being put into its development, but the technology has also been assigned an enormous burden. It has been asked by some to fix all that is wrong with education and, indeed in some rhetoric, with society itself. We must acknowledge too, that there are those who find instructional technology

IR018695

BEST COPY AVAILABLE

to be loathsome, signaling the beginning of the end of traditional quality. Instructional technology is neither a panacea for all of society's ills nor is it the destruction of the educational process.

Universities are exploring the potential of this new technology in a variety of ways, and the information which is gleaned from these innovative uses of technology will do much to provide a more reasoned approach to its use.

Project Vision has been undertaken by the Penn State University Commonwealth Campus System. The Commonwealth Education System includes 18 different campuses across Pennsylvania with over 850 faculty at the various locations. In the initial phase of the project, three campuses were chosen, each of which selected three faculty and twenty students to participate. In addition, a librarian from each of the three campuses also took part.

Each campus selected twenty incoming freshman based on an application submitted by the student, including two essay questions and requested references. Every attempt was made to obtain a representative cross-section of students. Early in the project, a variety of assessment instruments were administered to Project Vision (PV) students and to a random sample of non-PV students at each of the campuses. The PV students were found to be similar to other students on a variety of motivational and learning style parameters.

Teams of faculty, one from each of the three campuses, were responsible for developing on-line courses in their respective disciplines. Three courses were selected for the first year: Health Education (1 credit), American Studies (3 credits), and Science and Technology in Society (3 credits). These particular courses were selected for the project because they were General Education courses and have a flexible course structure. In addition, a new course was developed, Library Studies (3 credits), Learning Strategies for the Information Age, to introduce the students to the technology and search skills necessary to use the computer effectively as a means of information identification and retrieval.

Designing the on-line educational environment

When developing and teaching an on-line course the instructor has to develop an understanding of the nature of the medium, so that the structuring of the learning environment is appropriate for the learning activity. In Health Education, a conferencing software called First Class, which enabled the construction of on-line conferences wherein students could carry on asynchronous postings and discussions, was used. The instructor, in effect, has to design not only the "classroom", but social spaces and informal spaces as well. The key is to design an environment in which there is both a sense of group and community and an evident structure. This requires extensive planning and consideration of factors not normally associated with the teaching process.

The nature of on-line courses is that they can be very dynamic and fluid; content changes throughout the duration of the course. New material is available everyday and things can be added or deleted from a course as it is on-going.

Access to technology

A critical factor for the success of on-line courses is the availability of technology to the student and the instructor. This has two major components: reliable consistent access to the learning area and the appropriate tools, and, secondly, sufficient technological skills for the student and teacher. Both of these factors must be considered when designing an on-line course and the limitations weighed accordingly.

In Project Vision, the first factor was, in large part, addressed by giving the participating students the use of their own laptop computer for the school year and either a direct connection from their dorm room or the capability to dial-in from home. Even under the best of circumstances, technology being what it is, many frustrations occurred with the learning process when there were problems in connection due to individual or system failures. All students had the same machine and identical requisite software. As the incidence of on-line course offerings increases, the demands on existing institutional systems will increase commensurately, and the issue that arises for college students and their families is, how disadvantaged is a student who does not own his or her own computer? There are recurrent discussions at Penn State, and I am certain at other institutions, about the desirability of requiring all students to have a computer as a condition of enrollment. The instructor who is designing an on-line course has to take into account what student access is going to be, whether the public labs can handle the demand, or, if the assumption is made that students have their own computers available, what is the lowest common denominator for the state of technology and software capabilities on student-owned machines.

The individual level of technological knowledge for students and instructors is another factor that has to be addressed. At this point in time, generally basic technological training has to accompany the course content, and further, it appears that at most institutions the course instructor will have to teach the technologies. This will change as students get more technological training in the secondary schools, more faculty are trained and use the technology, and specialists are hired for course design and support through institutional promotion of learning technologies. My observation at this point is that our assumption that the secondary students are coming to college with sufficient computer skills is an erroneous one. We asked our PV students about their level of expertise on the computer, and even those who rated themselves as having a high level of proficiency were in need of training in the skills necessary to use the computers skillfully in the learning process. In Project Vision, we accomplished the needed training primarily through the Library Studies course, Learning Strategies for the Information Age, as part of the PV curriculum for the first semester. Students were taught the use of e-mail and chat programs, Netscape browser, library search skills, Gopher, Veronica, Archie, conferencing software (First Class), and presentation software (Persuasion). This course also taught methods of citing sources, information retrieval skills, copyright awareness, and other

associated topics. Institutions will have to decide what constitutes a minimum level of computer competency for a student, how it will be taught, and how to encourage and support the application of the skills throughout the curriculum of the institution by the faculty.

Faculty training and support is very time intensive and expensive, as is the equipment needed. It is not necessarily the case that the instructor must develop a high level of technology "know how", especially if there is technical and design support available, but one has to have a modicum of understanding of the capabilities and limitations of the technologies to develop on-line materials and to be ultimately creative with the potential use of technology in the classroom. Institutional support is a must, not only in giving the faculty time and training, but also in acknowledging the faculty time and skills necessary to use the technology for teaching and learning through the reward system. Unfortunately, this is not the case at all universities, particularly those which have defined themselves as research institutions.

Socialization

The issue of how on-line course work impacts on the social development of college students, particularly freshmen, is an important one, and one which has not been studied because the experience is new. This issue takes on increasing importance as the relative proportion of a student load becomes on-line, and as students participate from locations other than the campus. In Project Vision, our students took only four credits of their first semester and six credits of their second semester on-line; otherwise they were enrolled in classroom courses. The Library Studies course had many face-to-face meetings in the early portion of the Fall semester. As a greater portion of a student credit load consists of on-line courses, the consequences in terms of social factors will assume greater importance. It may be that for the traditional undergraduate, it is better to have courses which provide both an on-line component and face-to-face interactions.

The social development of the on-line experience is an important one, particularly if students are located remotely from the campus. We tried to build a sense of community across the three campuses by having a picnic at the beginning of the year. To instill a sense of local community among the students on a particular campus, we established "learning studios" at each of the campuses, a work area which was reserved for students enrolled in Project Vision. This was an attempt to give them a space to which they could "connect" with other students and have a sense of belonging to a group. Interestingly, at the two campuses that had dormitories, this area was rarely used by the dorm students. At the third campus, whose population is entirely commuter students, this area became extremely popular and a campus focal point for all the PV students. These students have voiced many objections to losing their space for next year when it is to be used for the new freshmen Project Vision students.

Health Education Course

As mentioned previously, the courses which were initially selected were courses that had fairly flexible content and such is the case with the Health Education course. The topic of Values and

Health Behaviors was selected, with a focus on bio-ethical issues relating to reproduction. The course components included specific content area, group presentations, and on-line discussions of the group presentations. The specific content included material that related to the anatomy and physiology of the reproductive system, material that the developers felt was necessary background material, enabling students to understand concepts of anatomy and physiology they might encounter in their readings and research. This material was very structured and was available to the student on a Web site they could readily access and study. Students were also given an assignment to go to a specified site in Australia to read a posted document about bio-ethics. These early assignments were designed to make students comfortable with accessing and reading materials on the Web, as well as providing good introductions to course issues.

It is important to note at this point that the Library Studies course, which was teaching the skills needed to allow students to do meaningful and productive research on the Web and in the library, had the students do assignments utilizing content areas that would be relevant for their Health Education assignments, thus giving them immediate relevance for the skills they were learning. This enabled students to have a focus on content and apply the skills they were learning appropriately; this was both a motivation and a time saver, since the Health Education course is only a one credit course and otherwise the workload may have exceeded what should be expected for a one credit course.

Group presentations and the ensuing discussion of those presentations made up the major portion of the course . Groups were assigned and they chose the particular issue they wanted to research and present. Group presentations were to include a slide presentation and textual material which other students could read and to which they could respond. As could be expected, there were many problems associated with the group processes, not unlike the problems often seen in group work. The use of technology did nothing to change that; in fact, students did not utilize the available methods to meet and discuss on-line, the majority preferring to use face-to-face discussions. Some examples of student comments* about the group process were:

> "Our group works once we get together, but there hasn't been one meeting that every member has attended except during classtime. It is EXTREMELY frustrating. Some of us feel like we're doing it all."

> "As for the group work, I generally dislike it, because I like to do things in my own way and I like to just get things over with as quickly as possible and not drag them out."

However, there were successes in the group processes. Students learned about group work, projects were collaborative, individual responsibility and responsibility to the group goal was developed, and there was more ownership of work.

* All of the student comments in this paper are taken from a conference in First Class called "How's it going?", a conference in which students were to post any comments they chose to make throughout the semester about the project. The quotes are taken directly from the conference postings and are presented as written by the students.

"I think that this has been a really good experience for me. Not only to learn about computers, but about people as well."

"But I know that in group situations compromise and communication are VERY important."

"I guess I think working in groups prepares us for the future and having to work with people who have different work ethics and even people who have none."

"As for me I know that I would much rather be put in this type of situation in school, where I can learn how to deal with these types of problems, rather than be faced with them for the first time in a professional setting and possibly not know how to deal with it."

After the groups posted their presentations, students had one week to read and discuss the presented issue in the on-line conferences. The group that posted the presentation was responsible for monitoring the discussion during that week. The quality of the on-line discussion was not good, and that is one of the factors we hope to improve for the next session. Responses, predictably, were often opinion and not referenced, with few logical threads. The role of the instructor in on-line discussions is an interesting question of balance between feeling one is contributing either too much or too little. If the group has been given the responsibility for monitoring the discussion, there is a fear of too much interference by the instructor in the discussions. When mis-information or excessive "bickering" occurs, it is not clear how long one should wait before stepping in. The instructor wants to give the appearance of being actively engaged in the discussion and yet not give the students the sense that he or she is "watching over" the conferences.

Grading

Grading an on-line course presents an interesting challenge to examine and perhaps redefine what should be evaluated and how. How one evaluates relative contributions of individuals to group projects and asynchronous discussions is not clear, nor is it satisfactory to many students. In the Health Education course we had the students in a group divide 100 points among the other members of the group, based on their perception of the contribution of that individual to the group. Students liked being able to differentiate and reward the doers from the slackers, but still wanted credit for what they had done specifically, e.g., putting their name on the portion of the project they completed. Students who do the work are inherently uncomfortable with another student receiving credit for the group project when he or she has contributed little or nothing, and rightfully so. These problems of grading group work certainly are not specific to on-line projects, but it may be that on-line courses may present some solutions that may not be possible otherwise.

To assess an individual student's other accomplishments in the course, each student was asked to assemble a portfolio of the resources they had found and their contributions to the group

discussions. In essence, they were asked to make their own case for the quality of their experiences and contributions to the course.

As long as we, as faculty, are responsible for assigning a grade at the conclusion of a course, this is an area that requires much thought, discussion, and planning. Grading has to be an inherent part of the course design, so that the instructor and the student have a thorough understanding of what a good grade, versus a poor grade, represents. Those of us who have traditionally based our grading on a quantifiable, knowledge-base acquisition have to rethink what should be evaluated when group work and interactive learning are a major portion of the course objective.

Student reaction to the Project Vision experience

Since we are just ending the first year of this project, we have few answers and insights for the question, what are the characteristics of the students who gain the most, or, conversely, the least, from this type of learning experience? It is my sense that the learning of the technology benefited the majority of students positively in terms of their performances in their other classes, and this idea was reinforced by student feedback. For example, one student who is an Education major did a required presentation in an educational theory course by using her computer and presentation software based on material she had researched on-line. While this is desirable, it raises the issue once again about the possible inequities which may result between students who have private access to computers and the skills to use them effectively, and those who do not. Institutions and faculty have to do what they can to ensure that a situation does not develop in which there is an inherent unfairness for the population of students who do not have the means to own or use a computer. A certain inequity will exist during this transition time, but institutions must plan and budget for the means to avoid any systematic unfairness. The improved skills in information retrieval and presentation, as well as the exceptional access they had to these sources, will benefit all students.

In general, the students were very positive about their experiences. The part they liked the least was the group work. One student comment sums up the feelings of a number of students:

> "Project Vision has taught us a great deal and I am thankful for being a part of this program. But I thought this was to be focused on learning how to use the computers and not working with others."

It should be pointed out that it was made clear in the brochure and in the initial meetings with the students that working with others was to be a feature of this project.

Other student comments that are of interest:

> "Faculty members: Do you realize how hard it will be for us to part with this? We're used to having these computers EVERY singles day? I don't know what I'd do without it."

It's not just the computers we're talking about. It's the whole concept behind project vision. If we leave it after this year we will have gained a lot of knowledge, but if we keep going; think of the possibilities. We really have become a family, and we don't want this to end here! "

" Project Vision taught me more than just about the information I recived from the classes, but I learned how to work in groups with other people from all different backgrounds and ideas and I learned how many increadible and unlimited things that are possible with technology. "

"I was computer illiterate, but I didn't want to remain that way. Project Vision is not only learning the awesome technology and preparing for the future, it's also a great way to meet guys. [Just Kidding :)] "

"Working together, I think, made us become closer. It's like we have our own little nitch on the campus. We hang out in our learning studio, go to the mall, and are now beginning to plan trips together. It has been a great experience and I wouldn't give it up for anything. "

"Anyway , PV has been a great learning experience for all of us. It has given us access to information that I never knew existed. I will definitely miss not having all of this information at my fingertips."

Implications

Having been involved in the use of technology in education for about a year and a half, I have some observations.

The use of technology in the classroom will increase dramatically over the next 3-4 years, as will the use of technology for course-related functions outside the classroom. Students who do not possess computer skills are at a disadvantage, and so, too, are students who are unable to own a computer.

The potential benefits of the widespread use of technology will be limited by the inability of the institutions to provide hardware and software access to all students. This may seem obvious, but it is important that institutions and course developers recognize this fact.

In the short term, use of instructional technology will be expensive and inefficient, but this will change in the long run.

In carefully designed instructional environments, there will be opportunity for students to learn in a manner best suited for the individual.

Students will have better access to information without time or location restraints; however, we have to ensure that the educational value is as good as, or better than, that which can be realized without the technology. Just doing something because we can is not wise unless it demonstrates its value in the learning process.

Faculty innovation and redesign of courses will enhance the educational experience because it is always good to reexamine what we do, even if we decide that which we have done is best.

Not only will individual courses be redesigned, curriculum redesign will occur, but not in the short term.

Student preparedness and their capacity and inclination to use vast resources is overestimated. Technology in and of itself will not automatically transform students into active and involved learners, avidly seeking information.

There are many ways to use technology to enhance the learning process and no one way is inherently superior. Bad teaching will not be improved, but good teaching can become better with thoughtful application of the tools that are available.

What is next?

The same four courses will be repeated by the three original campuses with an additional three, bringing the total to six campuses and 120 new Project Vision students. The courses will be revised and improvements made. The current PV students will have Speech Communications and English Composition as second year courses.

In addition, there is a second project called Project Empower in which faculty are being supported to develop portions of their existing courses to use the technologies for interactive and collaborative work. In the first phase, which is underway now, 104 faculty from the Commonwealth Education System have projects underway for implementation in Fall, 1996. In one of the projects, a group of incoming freshmen will be part of a "freshman experience" in which the student will take Health Education, Psychology, English Composition, and Integrative Arts and Earth and Mineral Sciences courses, all of which will have a portion of the course work on-line. The student will have one additional course, probably in Math, which will not be on-line. Thus, nearly the entire course load for a first semester freshman will have significant on-line components included.

There will be a new round of Empower proposals called for in the Fall, and again in the Spring. The stated goal of the Commonwealth Education System is to have 80% of the faculty using technology in some form by Fall, 1997. Institutional support for approved proposals includes a laptop computer, training and instructional support, and minimal release time.

Conclusions

What Project Vision has demonstrated in the first year is that it is possible to offer courses which are taught on-line to freshmen students and have the students be successful and enjoy the experience. What is less clear at this point is how the different learning environment enhanced or detracted from what the student experience as a freshman may have otherwise been. Another question, which is being addressed, is whether the experience does actually alter the learning styles of students and whether the change is desirable.

The extent to which an experience such as Project Vision will improve the educational experience of our students and help them to become life-time active learners remains to be seen. However, quotes from two students suggest that, at least for some, we are on the right track.

> "This was by far the best education experience I ever had. "
>
> "I Thank every one involved with Project Vision ... you have made a great difference in my life."